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ABSTRACT

An examination of the factors related to summer school at Cuyahoga Community College (Ohio) attempted to determine why 1970 summer enrollment had decreased, why growth in summer enrollment had been uneven since 1967, and whether changing the term from eight to six weeks had affected the enrollment. The impact of the length of the summer term(s), student reasons for attending the summer session, and faculty opinions regarding summer school were determined from questionnaires given to a sample of students and faculty who participated in the 1971 summer session. Regarding term length, technical-occupational faculty preferred a longer term; English and speech faculty preferred a shorter term. A significant proportion of students felt all courses were too long in terms of time spent in class, although many judged the 5-week courses as having too few weeks in the session. The most frequently cited reasons for enrolling were to get a degree or finish a program sooner. Faculty opinion showed little agreement as to the relative importance on enrollment of: (1) available summer employment for students, (2) the variety of courses, and (3) the length of the session. The study seems to indicate that a combination of long and short terms would be the most accommodating arrangement. (RN)

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ANALYSIS OF THE 1971 SUMMER CALENDAR

Office of Institutional Research and Planning

Office of Executive Vice President

Spring 1972

JC 720 163

Cuyahoga Community College
2124 East Fourteenth Street
Cleveland, Ohio 44115

UNIVERSITY OF CALIF.
LOS ANGELES

AUG 2 1972

CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

No. 143

TABLE OF CONTENTS

	Page
THE PROBLEM	1
Organization of the Study	1
PROCEDURE	
Data Collection and Analysis	2
The Sample: Students	2
The Sample: Faculty	5
ENROLLMENT INFORMATION	6
Summer Enrollment Changes at Cuyahoga Community College, 1967-1971	6
Cuyahoga Community College Summer Enrollment Growth Compared to Cleveland State University, Lakeland, Lorain and Sinclair Community Colleges	8
FACTORS RELATED TO SUMMER STUDENT ENROLLMENT	10
Faculty Respondents' Opinions About Influences on Summer Student Enrollment	10
Student Respondents' Reasons for Attending the 1971 Summer Session	12
Scheduling of Summer Classes Around Summer Job Hours	14
Reported Convenience of Transportation to the Campus	14
Number of Hours Carried by Summer Respondents	14
Respondents' Satisfaction with Summer Term Length Experienced	18
Faculty Opinions about Summer Term Length	19
Summer Grades	21
Additional Student Opinions About the 1971 Summer Session	25
Summary of Factors Related to Summer Term Length	26

TABLE OF CONTENTS (Continued)

	Page
SUMMARY	27
CONCLUSION	29
APPENDIXES	30
1. Summer Ss Compared to Regular Year Fall, Winter, Spring 1970-1971	31
2. Comparison of Summer Students to Fall, Winter, Spring Students 1970-1971	33
3. A Three-Year Comparison of Percentage of Males and Females for Three Quarters	34
4. A Three-Year Comparison of Enrollments by Term and New/Continuing/Returning Status	35
5. Comparison by Term of the Percentages of Students Classified by Sex and Program	36
6. Comparison by Term of the Percentages of New and Former Students Classified by Transfer Status	37
7. Comparison by Term of the Percentages of Students Classified by Age Groups	38
8. Summer Students Classified by Full or Part-Time Status, Respondent Status, Transfer Status, and New/Continuing/Returning Status	39
9. Comparison of Summer Faculty Contacted to Faculty Respondents in Terms of Sex and Campus	40
10. Average Rank of Influences Affecting Summer Student Enrollment by Faculty's Reported Preference for Length of Summer Session	41
11. Unemployment Data 1967-1971 Data Source: Labor Market Analyst, Ohio State Employment Services (11/19/71)	42
12. Distribution of Subject Areas for Courses Reported by Student Respondents	43
13. What a Ten-Credit Hour Summer Load Entails in Class Time and Theoretical Study Time	44

LIST OF TABLES

Table		Page
1.	Summer Students Contacted Compared to Respondents by Campus and Full-Time/Part-Time Status	3
2.	Transfer Status of Respondents Compared to All Summer Students	3
3.	Enrollment Status of Respondents Compared to All Summer Students	4
4.	Summer Enrollment Headcount, 1967 through 1971	6
5.	Headcount and FTE Enrollment at Cuyahoga Community College and Four Other Institutions, Summer 1969, 1970 and 1971	9
6.	Average Rank of Influences Affecting Summer Student Enrollment by Faculty's Reported Preference for Length of Summer Session	11
7.	Students' Reported Reason(s) for Attending the 1971 Summer Session	13
8.	Frequency of Problems in Scheduling Classes Reported by Employed Respondents	14
9.	Distribtuion of Student Responses Concerning Transportation	15
10.	Distribution of 1971 Summer Student Enrollment by Campus and Number of Credit Hours Carried	16
11.	Number and Percentage of Course Sections Cancelled During the 1970 and 1971 Summer Sessions	17
12.	Responses About Satisfaction with Length of Term and Length of Class Period Per Day	18
13.	Student Satisfaction with Length of Term by Length of Course Taken	19
14.	Reported Preference for Length of Summer Term by Faculty Respondents' Subject Areas	20
15.	Reported Preference for Length of Summer Term by Length of Session Taught and Campus	21
16.	Summer Grade Point Averages Minus Prior Grade Point Averages for Summer Student Subsample	22

LIST OF TABLES (Continued)

Table		Page
17.	Course Grades for Four Terms	22
18.	Comparison of Summer and Spring Grade Averages by Campus	23
19.	$\underline{t}$ Values for Mean Course Grades by Campus and Term Length	24
20.	Correlation Between Number of Summer Credit Hours Registered and Grade Point Average for Those Hours	24
21.	Opinions About Quality of Instruction, Time of Day Class Met and Grading for Courses Reported by Student Respondents	25

THE PROBLEM

The primary reason Cuyahoga Community College offers a summer session is to serve its students. The most important consideration in setting the length of the summer term is how to best accommodate our summer students. In a way summer student enrollment offers a barometer of the degree to which we are maximally accommodating our students. Enrollment in Cuyahoga Community College for the 1970 summer session, for example, decreased while enrollments in other institutions increased. Why? The growth in enrollment for Cuyahoga Community College summer sessions has been uneven since 1967. Why? Cuyahoga Community College changed the length of its summer term from eight to six weeks. Did this change in length affect the enrollment?

A study was initiated to provide answers for the above questions, in the hope that some explanations for the phenomena could be found in an examination of the variables related to summer school at Cuyahoga Community College. One variable, length of term, has been singled out for primary concern because of its especial interest to the Calendar of Instruction Committee. To be sure, a decision about term length(s) for the 1972 summer session could be more confidently reached with a description of the effects that might be expected from a change in term length. The effect that might be measured objectively is the number of students enrolled. More subjectively measured effects are in the area of faculty and student satisfaction or dissatisfaction.

Organization of the Study

The remainder of the study considers the aspects of the problem in the following order:

(1) data collection and analysis
(2) description of the sample
(3) summer enrollment changes at Cuyahoga Community College, 1967-1971
(4) Cuyahoga Community College summer enrollment growth compared to four other Ohio higher education institutions
(5) factors related to enrollment: headcount and student full-time equivalent
(6) factors related to term length
(7) student evaluation of the time their class(es) met, grading and instruction.

PROCEDURE

Data Collection and Analysis

After collecting data on summer school enrollments we thought that students and teachers would be appropriate people to question for the purposes of this study. We sent questionnaires to a sample of students and faculty who participated in the 1971 summer session at Cuyahoga Community College. Students were asked to relate their reasons for attending the summer session, to evaluate courses they took and the appropriateness of the eight and/or five-week term length experienced. Additional data about the responding students were obtained from the Student Master File compiled by the Office of Admissions and Records and maintained under their direction by the Computer Center. Faculty were requested to cite a preference for term length appropriate to their respective subject areas and to rank summer term length in importance among other influences affecting summer student enrollment.*

Data were generally counted as responses in categories and, where appropriate, subjected to chi square analyses to test null hypotheses about relationships. In some cases, however, data were assumed to approximate equal interval scales and so were analyzed with student's *t*. Where we argued that data carried ordinal properties, we applied a Kolmogorov-Smirnov test. As always, some of the assumptions to be met in order for a particular statistical inference to be valid may be questionable. We have tried to recognize such dangers, so we would welcome expressions pointing out our oversights.

In reporting analyses, we attempted to exercise a rational balance between a reluctance to comment where criticism of the comment would be justified and a willingness to offer what appears to be a rationale, albeit incompletely supported, view. So readers, beware.

The Sample: Students

Questionnaires were mailed to 822, or 15 percent, of the summer student body. We sampled two populations: full-time students and part-time students. All full-time students (174) were contacted to insure enough of a return for analysis. We contacted a random selection of 648 part-time students. Usable questionnaires were processed for 206 students or 25 percent of the combined samples.

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*Copies of the questionnaires are included in the Appendix.

We wanted to know whether we could generalize our results to all summer school students. We found that respondents to the questionnaire were <u>not</u> representative of all summer students. The respondents differed from the population in the areas of campus response (Table 1), of transfer* (Table 2) and of student enrollment status (Table 3): Metropolitan campus part-time students, new and returning students, and transfer students were underrepresented in the sample.** Larger proportions of continuing and non-transfer students responded to the questionnaire as reported in Table 2. (See also Appendix 8.)

TABLE 1

Summer Students Contacted Compared to Respondents by Campus and Full-Time/Part-Time Status

	Metropolitan		Western		Total	
	Sample	Respondents	Sample	Respondents	Sample	Respondents
Full-Time	155	32	19	5	174	37
Part-Time	369	72	279	97	648	169
TOTAL	524	104	298	102	822	206

TABLE 2

Transfer Status of Respondents Compared to All Summer Students

Transfer Status	1971 Summer Session	
	Respondents (N=206)	All Students (N=5531)
Transfer	22%	29%
Non-Transfer	78%	71%
TOTAL	100%	100%
Probability of sample of respondents being drawn at random from all students is less than .05.		

*This result is related to a hypothesis to be considered in future questionnaire surveys: viz., student response to institutional questionnaires may be a function of the extent to which the student has attended, or been involved with, the institution.

**How many of these students were transients could not be ascertained.

TABLE 3

Enrollment Status of Respondents Compared to
All Summer Students

Student Enrollment Status	1971 Summer Session	
	Respondents N=206	All Students N=5531
New	18%	24%
Continuing	71%	62%
Returning	11%	14%
TOTAL	100%	100%

The distribution of ages of the respondents did not represent the age distribution of all summer students. Three percent of the respondents were age 18 or younger compared to ten percent of all summer students and 23 percent of the respondents were over 30 compared to 17 percent of all summer students (See Appendix 7). The differences are significant at the .02 level using chi square. The differences previously cited (in student enrollment and transfer status) are also statistically significant. Since the influence of enrollment status and/or transfer status and age upon other variables assessed is unknown, the reader is cautioned to avoid generalizing the findings to all summer school students.

A comparison of the respondents to all summer students in terms of sex indicated no significant differences. The 206 summer students who responded to the survey were 49 percent males and 51 percent females.

Sixty percent of the respondents were single, 21 percent were married and 19 percent were either widowed, separated or divorced.

As reported in Table 1, 82 percent of the respondents were part-time, while 18 percent carried full-time summer loads of 12 or more hours. Of course, because of the summer schedule, 12 class hours per week in the regular ten-week term is at least 15 hours in the eight-week term. In the five-week term the 12 class hours per week become 24. Thus a 12-hour student who spent another two hours in study for each class hour would be involved in school work from 45 to 72 hours per week.

Forty percent of the respondents indicated that they had attended a college summer session before the 1971 summer term at Cuyahoga Community College. Of these students with previous summer school experience, 15 percent reported having attended a five-week session, 40 percent cited a six-week term, 29 percent indicated an eight-week term, 10 percent reported experience with a term of ten or more weeks, and 6 percent did not report the length of summer term attended.

Sixty-eight percent of the respondents were employed while attending the 1971 Cuyahoga Community College summer session; most of these students (77 percent) worked on a full-time basis, i.e. more than 28 hours per week.

The Sample: Faculty

Faculty reaction to the 1971 summer session was requested on a questionnaire distributed to 119 full-time faculty members who taught during both the 1970 and 1971 summer sessions. A total of 61 out of 67 returned questionnaires were complete enough to process.

The sample of faculty was representative in terms of sex and campus distributions (see Appendix 9).

The questionnaire asked the faculty member to report his area of instruction, his preference for either a five-, six- or eight-week summer term, his opinion about the relative importance of certain influences on summer student enrollment and his comments relating to any additional influences on enrollment and to the length of the 1971 summer session.

Faculty respondents were identified by campus, length of term(s) taught and whether their classes were scheduled as day, evening or both.

ENROLLMENT INFORMATION

Summer Enrollment Changes at Cuyahoga Community College, 1967-71

Summer enrollment headcount, for the years 1967 through 1971, is depicted in Table 4 and Figure 1. By comparing 1969 to 1968, we see that although the length of the summer sessions remained the same on both campuses, Western felt an increase in summer enrollment while the Metropolitan campus experienced a decrease. The reverse situation occurred in 1970 with the change to a six-week term: Metropolitan enrollment increased and Western enrollment decreased. The campus differences in summer enrollment growth, corresponding to both no change in summer term length for 1969 and a change in summer term length for 1970, suggest that factors other than or in addition to length of term were influencing student enrollment on each campus.

District enrollment growth, analyzed in relation to summer term length, tends to minimize the effect of unique campus influences on enrollment. An examination of District summer enrollments shows that the only interruption to growth occurred for the 1970 six-week summer session when total enrollment dipped. A substantial increase occurred in 1971 which not only recouped 1970 losses but also paralleled the growth of 1968.

TABLE 4

Summer Enrollment Headcount, 1967 through 1971

Summer Session		Metro		Western		District Total		Dates	
Year	Length	N	% Incr.	N	% Incr.	N	% Incr.	Start	End
1967	(8 wks)	2701		883		3584		June 19	Aug 11
1968	(8 wks)	3064	+13%	1157	+31%	4221	+18%	June 17	Aug 9
1969	(8 wks)	2964	- 3%	1404	+21%	4368	+ 3%	June 23	Aug 15
1970	(6 wks)	3034	+ 2%	1284	- 9%	4318	- 1%	June 22	July 31
1971	(8 and 5 wks)	3670	+21%	1521	+18%	5191	+20%	June 28	July 30 and Aug 20

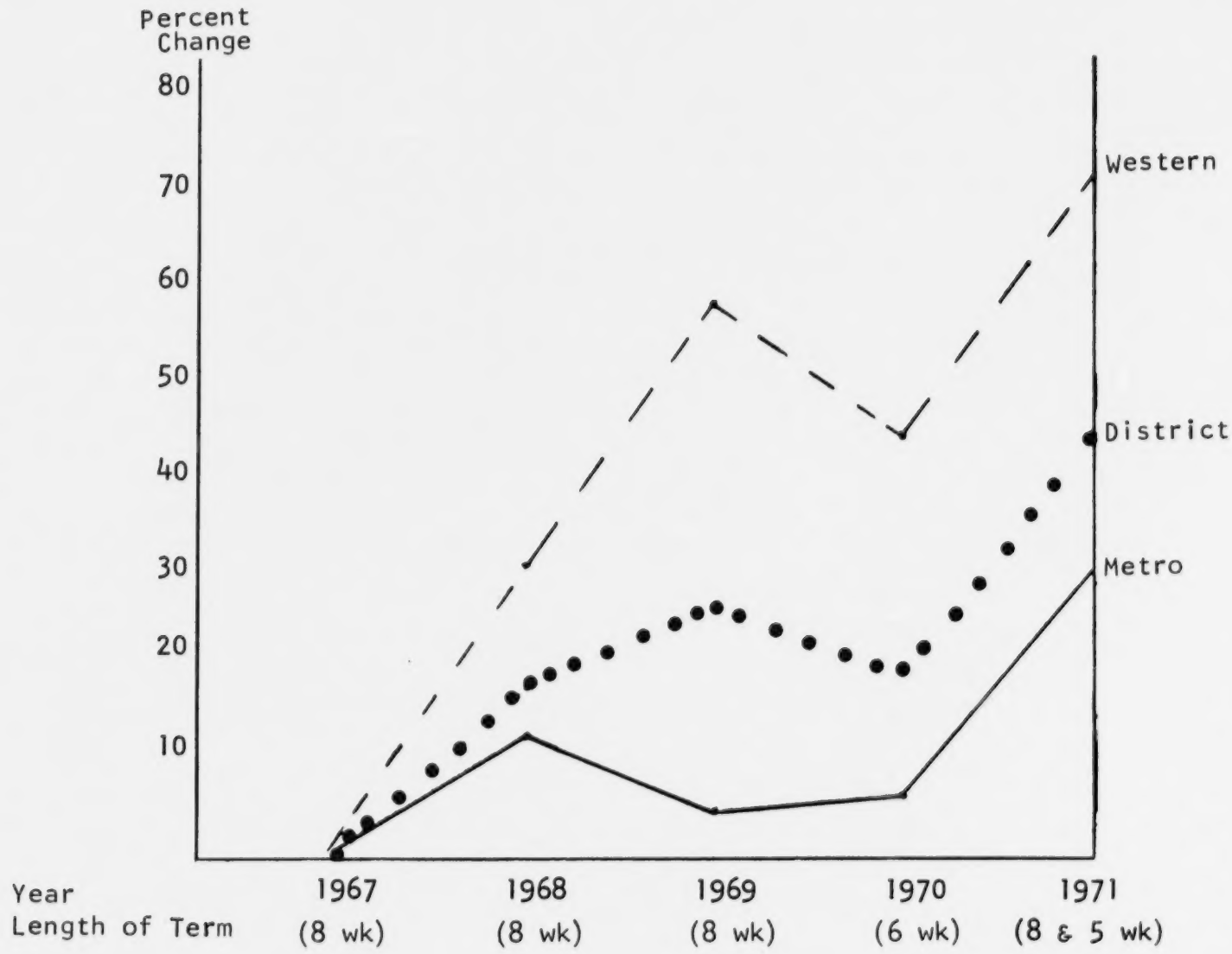

Figure 1. Percent Change in Summer Enrollment 1968-71
Based upon 1967 Summer Headcount

Cuyahoga Community College Summer Enrollment Growth Compared to Cleveland State University, Lakeland, Lorain and Sinclair Community Colleges

The enrollment data for four Ohio public institutions of higher education are included on Table 5. In examining the data the following points should be kept in mind:

(1) In 1969 only Sinclair Community College and Cuyahoga Community College offered a single summer module (eight-weeks long in both cases) while Cleveland State University, Lakeland Community College and Lorain Community College offered two five-week modules with a concurrent ten or eleven-week session.

(2) In 1970 only Cuyahoga Community College offered a single summer module (six-weeks) since Sinclair had adopted the "two short, one long" summer term schedule.

(3) In 1971 Cuyahoga Community College remained the only exception to the "two short, one long" modular system.

A mean growth rate of 17 percent was computed from the 1970-71 percentage changes in headcount enrollment for the institutions on Table 5. Based on that figure, Sinclair and Lakeland were experiencing relatively great summer enrollment growth, while 1970 Cuyahoga Community College summer enrollment decreased one percent.

In summary, Figure 1 and Table 5 suggest that the trend from 1967 to 1971 for Cuyahoga Community College summer enrollment has been one of overall growth, interruped in 1969 and 1970. In relation to the four other institutions, Cuyahoga Community College has been growing at a slower rate than the other institutions.

TABLE 5

HEADCOUNT AND FTE ENROLLMENT AT CUYAHOGA COMMUNITY COLLEGE AND FOUR OTHER INSTITUTIONS
SUMMER 1969, 1970 and 1971

Institution	HEADCOUNT										FTE					
	TOTAL		DAY		EVE.		PART-TIME		FULL-TIME		TOTAL		DAY		EVE.	
	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change
Cuyahoga Community College																
Summer 1969	4,368	--	2,071	--	2,297	--	4,266	--	102	--	1,537	--	896	--	641	--
Summer 1970	4,318	- 1%	2,327	+12%	1,991	-13%	4,273	-0-	45	- 56%	1,374	-11%	883	- 1%	491	- 23%
Summer 1971	5,191	+20%	2,917	+25%	2,274	+14%	5,019	+17%	172	+282%	1,881	+37%	1,235	+40%	646	+ 32%
Sinclair Community College																
Summer 1969	971	--	560	--	411	--	#	--	#	--	383	--	261	--	122	--
Summer 1970	1,838	+89%	1,041	+86%	797	+94%	1,196	--	642	--	654	+71%	400	+53%	254	+108%
Summer 1971	2,521	+37%	1,463	+41%	1,058	+33%	1,340	+12%	1,181	+84%	852	+30%	500	+38%	302	+ 19%
Cleveland State University*																
Summer 1969	4,287	--	2,454	--	1,833	--	#	--	#	--	2,730	--	#	--	#	--
Summer 1970	4,716	+10%	2,696	+10%	2,020	+10%	#	--	#	--	2,295	-16%	#	--	#	--
Summer 1971	5,609	+19%	3,207	+19%	2,402	+19%	#	--	#	--	2,710	+27%	#	--	#	--
Lorain Community College																
Summer 1969	1,387	--	#	--	#	--	--	--	#	--	#	--	#	--	#	--
Summer 1970	1,458	+ 5%	#	--	#	--	--	--	#	--	#	--	#	--	#	--
Summer 1971	1,735	+19%	942	--	793	--	1,275	--	460	--	543	--	339	--	204	--
Lakeland Community College																
Summer 1969	565	--	#	--	#	#	#	--	#	--	225	--	#	--	#	--
Summer 1970	735	+30%	#	--	#	#	#	--	#	--	222	- 1%	#	--	#	--
Summer 1971	1,093	+49%	#	--	#	#	#	--	#	--	315	+42%	#	--	#	--

*Data for Cleveland State University exclude Cleveland State University academic centers and Law College.

#Data were not available in all categories.

FACTORS RELATED TO SUMMER STUDENT ENROLLMENT

Some of the factors related to summer student enrollment, such as the length of the summer term, the number and variety of courses offered, scheduling and advertising of the summer session, can be controlled quite easily. Other influences are not so easily controlled, such as the course offerings and course schedules at other institutions, the availability of summer employment to students, and a Cleveland Transit strike like the one experienced in the summer of 1970. A third category of factors affecting enrollment, the students' reason(s) for attending summer school, is not subject to institutional control by any direct means yet may be related to variables that the institution does control.

In examining the influences on summer student enrollment, we shall refer to two sources of data: summer students and summer faculty. First, we'll report how faculty ranked the relative importance of influences on enrollment. Then we'll examine the students' reported reasons for attending the summer session, their experience with summer scheduling in relation to employment hours, and their convenience or inconvenience in commuting to the campus.

Faculty Respondents' Opinions About Influences on Summer Student Enrollment

We asked the faculty to rank the relative importance of four influences which might affect summer student enrollment (see Appendix 10 for average ranks assigned). Table 6 shows how the influences were ranked, on the average, by the groups of respondents reporting a preference for either the five-, six-, or eight-week summer term. The responses are reported by campus, although we cannot determine whether real differences exist between Metropolitan and Western campus responses.*

The data on Table 6 show little unanimity among the groups of respondents in the rank of averages for importance of the four influences on summer enrollment. The exception, however, is the general consensus of opinion about the relative unimportance of advertising: the average for all but one group of respondents placed advertising in the fourth, or last position of importance.

*The small number of Western faculty respondents (15) precludes reliable estimates of the probability of sampling differences between campuses.

TABLE 6

AVERAGE RANK OF INFLUENCES AFFECTING
SUMMER STUDENT ENROLLMENT BY FACULTY'S
REPORTED PREFERENCE FOR LENGTH OF SUMMER SESSION

Requested Preference for Length of Summer Term by Campus	Rank of Average Rank of Influences on Summer Student Enrollment			
	Availability of Employment	Advertising of Summer Session	Variety of Courses Offered	Length of Summer Term
5-week Term Preferred				
N=5 Western faculty	3	4	1	2
N=12 Metropolitan faculty	2	4	3	1
6-week Term Preferred				
N=3 Western faculty	1.5*	4	1.5*	3
N=12 Metropolitan faculty	2	4	3	1
8-week Term Preferred				
N=7 Western faculty	1	2	3	4
N=22 Metropolitan faculty	2	4	1	3

*Average rank values were the same in these categories, see Appendix 10.

In addition to ranking the influences specified on the questionnaire, faculty members were asked to comment on any other influences on enrollment they felt to be important. Forty-five of the 61 respondents commented, citing the following factors:

(1) The dates of the summer session and the time of day at which courses are scheduled in relation to the summer schedule of other institutions and in relation to the student's employment hours

(2) The implication that some faculty members have special appeal to some students

(3) The state of student finances, the state of the economy and the low cost of attending Cuyahoga Community College

(4) The small size of summer classes and more personalized instruction

(5) The transferability of credits to other institutions

Student Respondents' Reasons for Attending the 1971 Summer Session

The reasons the students identified for attending the 1971 summer session are reported in Table 7. The student was asked to check all reasons applicable to his situation. In order to compute the distribution of reasons by respondents, one of their responses was selected at random when students cited more than one reason. Of course the distribution of all reasons was also calculated. Both distributions, percent of respondents and percent of responses, are similar in that the largest percentages in each case correspond to reasons related to enabling the student to complete his schooling.

The students' use of the summer session to complete their schooling may well be related to summer term length. A shorter term means longer class hours and/or more frequent classes, which limits the number of courses that students can take. Thus the shorter term may be desirable for those students interested in picking up only a few credits, but the longer session may be a better arrangement for students who wish to earn as many credits as possible. We'll continue this discussion in the following section reporting other factors related to summer term length.

"Other" responses included a variety of reasons not specified on the questionnaire. Respondents in this category explained their summer attendance as the result of:

(1) A desire to lessen the number of courses they needed to take during the regular year

(2) An effort to earn credits for transfer

(3) A need for something to do and not being able to secure summer employment

TABLE 7

STUDENTS' REPORTED REASON(S) FOR ATTENDING
THE 1971 SUMMER SESSION

Reason(s) for Attending Summer Session	Percent of Total Respondents (N=206)	Percent of Total Responses (N=304)
To repeat a course or courses	2%	4%
To make up credit(s)	9%	8%
To get degree sooner	27%	30%
To finish program sooner	25%	27%
Course(s) appealed to me	11%	11%
I am in a special orientation program	5%	5%
Other	20%	16%
TOTAL	99%	101%

(4) A necessity for fulfilling a military or job obligation

(5) A wish to continue school to "stay in the study habit."

A comparison of respondents who reported previous summer school experience to those without previous experience revealed no significant differences between the reasons for attending the 1971 summer session. Hypothesizing that reasons for summer attendance may have been related to the respondents' summer employment status, respondents who reported that they were employed were compared to those reportedly not employed. The analysis showed no significant differences between the reasons reported by the two groups.

Since some students reported that they attended the summer session due to the unavailability of employment, we compared the summer unemployment rates for the Cleveland Metropolitan Area* to summer enrollment at Cuyahoga Community College. The 1971 rates for May, June and July (about five percent) were higher than the corresponding rates for 1970 (about four and

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* Includes Cuyahoga, Medina, Geauga and Lake counties

one-half percent) but the 1970 summer unemployment rates had been about double those for 1969 (about 2.3 percent). (See Appendix 11.) If unemployment were related to summer enrollment, in direct inverse proportion, then Cuyahoga Community College should have experienced an increase, rather than a decrease, in 1970 summer headcount.

Scheduling of Summer Classes Around Summer Job Hours

Respondents who reportedly were employed indicated whether or not scheduling class time around their jobs had been a problem. Of those employed, eleven percent indicated that scheduling had been a problem. These data are summarized in Table 8.

TABLE 8

FREQUENCY OF PROBLEMS IN SCHEDULING CLASSES
REPORTED BY EMPLOYED RESPONDENTS

Time of Day Respondents Were Employed	Frequency of Scheduling Problems for Employed Respondents					
	Metropolitan		Western		Total	
	Yes	No	Yes	No	Yes	No
Morning	2	9	--	6	2	15
Afternoon	--	5	--	5	--	10
Evening	2	8	1	12	3	20
Any Combination of Above	6	34	4	47	10	81
TOTAL	10 15%	56 85%	5 7%	70 93%	15 11%	126 89%

Reported Convenience of Transportation to the Campus

About three-fourths of the respondents indicated that transportation to the campus was convenient. The differences between campuses shown on Table 9 are not significant.

Number of Hours Carried by Summer Respondents

The logic of the application of a standard amount of class time necessary per credit hour carried by a college course leads to the conclusion that the shorter the length of the summer term, the fewer credit hours the students can take. The best empirical support of this argument would be to classify students as enrolled in a five or eight-week session and compute

TABLE 9

DISTRIBUTION OF STUDENT RESPONSES
CONCERNING TRANSPORTATION

Reported Convenience of Transportation to the Campus	Percent of Metropolitan Campus Respondents (N=104)	Percent of Western Campus Respondents (N=102)	Percent of Total (N=206)
Convenient	74%	77%	76%
Inconvenient but not a problem	20%	18%	19%
A problem most of the time	4%	5%	4%
No response	2%	--	1%
TOTAL	100%	100%	100%

the average number of credits taken per student. Unfortunately we didn't collect data to classify students as five- or eight-week enrollees. The closest we could get was to compare the average credit hours per student for the two campuses (see Table 10). The difference is striking.

The differences in the number of summer hours taken could have been a result of term length, since no significant campus differences existed between the respondents in either the reported reasons for attending summer school or employment status -- two variables that might influence the number of hours a student carries. Term length, however, differed by campus. It appears, then, that the five-week module with an eight-week session operating primarily in the evening resulted in fewer FTE students.

In choosing the length of the summer term, the following question would probably be considered: Should students have the opportunity to take a few credits over a shorter span of time in addition to the choice of more credits over a 45-percent longer period of weeks?

TABLE 10

Distribution of 1971 Summer Student Enrollment by Campus and Number of Credit Hours Carried

Number of Hours Carried During Summer	Metropolitan Campus		Western Campus		Total	
	Headcount	%	Headcount	%	Headcount	%
1 - 4	1817	49.5	976	65.1	2793	54.0
5 - 8	1257	34.3	423	28.2	1680	32.5
9 - 12	501	13.6	95	6.3	596	11.5
13 or more	94	2.6	6	0.4	100	1.9
TOTAL	3669		1500		5169	
MEAN*	5.72		4.75			
STANDARD DEVIATION	3.03		2.26			

* The difference between the Metropolitan and Western campuses means is significant at the .0008 level.

In answering the question, data would probably be sought as to the feasibility of offering a choice from the standpoint of serving enough students in both longer and shorter terms.

In Table 11 we show the number of sections cancelled at Western, comparing the five-week module with the eight-week module. These data for Western 1971 suggest that the eight-week module did not attract as many students since 60 percent of the eight-week module was cancelled while only 40 percent of the five-week module was cancelled. However, since most day offerings were five-week courses and all evening offerings were eight-week courses, the proportion of courses cancelled is not a clear indication of student preference unless the differences in day and evening offerings and students are discounted as an influence upon student enrollments.

There is another aspect to the matter of term length which should also be considered. We wonder if the popularity of the five-week session is in full consideration of the amount of increase in knowledge, skill and understanding compared to the number of credit hours accrued. We're thinking

TABLE 11

NUMBER AND PERCENTAGE OF COURSE SECTIONS CANCELLED
DURING THE 1970 AND 1971 SUMMER SESSIONS

Campus and Summer Session	Scheduled Sections			Cancelled Sections by Time						Credit Sections Cancelled	Non-Credit Sections Cancelled	Number of Students in Cancelled Sections
				Day		Eve		Total				
	Day	Eve	Total	No.	Percent of Sched. Day	No.	Percent of Sched. Eve	No.	Percent of Sched. Total			
Metropolitan 1970	274	125	399	78	28%	25	20%	103	26%	82	21	333
1971	217	115	332	31	14%	22	19%	53	16%	42	11	95
Western 1970	74	70	144	27	36%	17	24%	44	31%	36	8	264
1971	77	65	142	34	44%	15	23%	49	35%	45	4	379
5-week	(62)	--	(62)	(25)	40%	--	--	(25)	51%			
8-week	(15)	(65)	(80)	(9)	60%	(15)	(23%)	(24)	49%			
District Total 1970	348	195	543	105	30%	42	22%	147	27%	118	29	597
1971	294	180	474	65	22%	37	21%	102	22%	97	15	474

*Data sources: RG2*31 Summer 1970 and 1971; and Registration Tally Reports (RG2*21) Summer 1970 and 1971

of a set of interrelationships something like this: the credit hours are the measure of outcome which gets recorded; the "pay off" in terms of a summer's work may be in credit hours; on the other hand the increase in knowledge, skill, and understanding may be the principal "pay off". We know from other studies that the effect of massed versus spaced learning activity varies according to both the amount of material to be assimilated and the type of outcome objective; "getting it over with" is compatible with the credit hour "pay off," but it may not be compatible with the increase in knowledge, skill and understanding "pay off." Of course both "pay offs" weigh in the decision. Their relative weight must be considered carefully.

Respondents' Satisfaction with Summer Term Length Experienced

Analysis of the student responses to the appropriateness of the term length experienced (Table 12) indicated that there was a significant proportion of responses to "too few weeks in the summer session" for the course reported. This was true of both Metropolitan and Western Campus responses.* Moreover, a significant proportion of responses indicated that the length of the class period per day was "too long."

TABLE 12

Responses About Satisfaction with Length of Term and Length of Class Period Per Day

Questionnaire Item	Percent of Responses		
	Metropolitan	Western	Total
Number of Weeks in Session for This Kind of Course:			
About Right	54%	70%	61%
Too Many	19%	11%	15%
Too Few	27%	19%	12%
Departure from "Right"	$p < .03$	$p < .04$	
Length of Class Period per Day			
About Right	68%	83%	75%
Too Long	23%	15%	19%
Too Short	9%	2%	6%
Departure from "Right"	$p < .003$	$p < .002$	

Opinions about the appropriateness of the term length for reported courses were further analyzed by the term length experienced for those courses, Table 13. The data revealed significance for only five-week courses

*Metropolitan and Western campus means did not differ significantly.

TABLE 13

Student Satisfaction with Length of Term by
Length of Course Taken

Length of Term and Time Experienced for Courses Reported by Respondents (Metropolitan & Western)	Responses to Appropriateness of Number of Weeks in Session for Courses Reported							
	About Right		Too Many		Too Few		Total	
	No.	Row %	No.	Row %	No.	Row %	No.	%
Five-week Courses (Day)	40	71%	1	2%	15	27%	56	100%
Eight-week Courses (Day)	60	51%	25	21%	32	27%	117	99%
Eight-week Courses (Evening)	83	65%	20	16%	24	19%	127	100%
TOTAL	183	61%	46	15%	71	24%	300	100%

reported. That is, a significant proportion of the opinions about courses taken on a five-week basis corresponded to "too few" weeks in the summer session. * Significant differences did not occur for either eight-week day or eight-week evening courses.

Faculty Opinions about Summer Term Length

Faculty were asked to cite a preference for term length (five, six, or eight-weeks) appropriate to their respective subject areas, Table 14. Binomal probabilities were computed by combining responses to "five" and "six" weeks and subsequently identifying them as "shorter term" preferences. Differences between shorter and longer term faculty preference were significant in two subject areas: English and Speech respondents favored a shorter term while Technical-Occupational respondents clearly favored a longer term.

The reported preferences for term length were also analyzed by the length of term the faculty respondents taught, Table 15. Again "five" and "six" week preferences were combined as a preference for a "shorter" term. Recalling that all the respondents experienced the six-week summer session of 1970, we see that after teaching a five- and/or eight-week term in 1971 the faculty respondents had no clear preference for one of the term lengths over the other.

The last item on the faculty questionnaire provided space for additional comments on the length of the summer session. Multiferous remarks were

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*$t=2.69$, $p < .004$ for five-week (day)
$t= .909$, $p < .09$ for eight-week day
$t= .80$, $p < .12$ for eight-week evening

TABLE 14

Reported Preference for Length of Summer Term by Faculty Respondents' Subject Areas

Subject Areas of 1971 Summer Faculty Respondents	Reported Preference for Length of Summer Term			
	5-weeks	6-weeks	8-weeks	Total
English and Speech**	8	2	2	12
Mathematics	--	2	4	6
Biological and Physical Sciences	3	--	6	9
Other Arts and Sciences: social studies, art, music, physical education	3	5	6	14
Business	3	6	6	15
Technical Occupational***	--	--	5	5
Total	17	15	29	61

*The five- and six-week categories were combined to represent "shorter term" contrasted to "eight-week term" and thus allowed use of the binomial test for significance.
**Significant at the .02 level.
***Significant at the .03 level.

offered, many of which indicated a preference for length of term(s) with no explanation of why it would be appropriate. A few of the respondents favoring a short session complained of little free or vacation time afforded by the longer term. Other respondents emphasized the academic appropriateness of the longer summer term without further explanation as to why a longer term might be more appropriate. Nine respondents from Metropolitan and four from Western suggested various combinations for summer modules such as: two fives, two fives and one ten, two sixes, one six and one five, two fives and one eleven. Three respondents suggested extending the summer session to a full, twelve-week term. Overall, the responses tended to offer solutions to the problem of term length without identifying the aspects of the problem to be solved by those solutions.

TABLE 15

Reported Preference for Length of Summer Term
By Length of Session Taught and Campus*

Length of Session Taught by Faculty Respondents (by campus)	Reported Preference for Length of Summer Term			
	5-weeks	6-weeks	8-weeks	Total
Metropolitan Campus Respondents Who Taught 8-week Course(s)	12	12	22	46
Western Campus Respondents Who Taught 8-week course(s)	3	--	7	10
5-week course(s)	--	2	--	2
8 and 5-week courses	2	1	--	3
Total	17	15	29	61

*The 5 and 6-week categories were combined to represent "shorter term" as contrasted to "8-week term" and thus allowed use of the binomial test for significance.

Summer Grades

Is the length of the summer term related to student grades? Term length, within the context of our study, has already been defined as a "shorter" versus a "longer" term. The following presents two kinds of comparisons of student grades, one being a check for differences between grades received for the "shorter" summer session and the "longer" regular academic quarter, and the other for differences between grades received for the shorter and longer summer modules.

We developed two hypotheses about what results could be expected from the comparisons. The first hypothesis was that summer grades were higher than grades for a regular academic term. We can speculate why this should be true, but our purpose here was to support the hypothesis by data rather than by rationale.

The second hypothesis was that grades for the eight-week summer module did not differ from those for the five-week module. The assumption was that variation in grades for "short" and "shorter" terms would be minimal and any difference would be insignificant.

In testing the hypotheses, two groups of data were used: (1) all course grades for students enrolled for the Spring and Summer 1971 terms and (2) prior and summer grade point averages (G.P.A.) for a subsample of 159 respondents. Summer course grades were grouped by campus and length of session.

The data in Table 16 relate to the hypothesis that summer grades were higher than regular term grades. Prior G.P.A. was compared to summer G.P.A. for the 159 respondents. The difference is significant at the .05 level.

TABLE 16

Summer Grade Point Averages Minus Prior Grade Point Averages for Summer Student Subsample

Number of Cases	159
Mean Summer Grade Point Average	2.93
Mean Prior Grade Point Average	2.82
Mean Difference	.11
Standard Deviation	.81
Minimum Difference	-3.00
Maximum Difference	2.04
t Value	1.77
Probability	less than .05

Another approach to testing the same hypothesis is to compare all course grades earned by Summer and Spring students. Here, Spring will be used as the most recent example of a regular academic term. Since Spring grades were higher than those received in Winter 1971 and Fall 1970, the difference between summer grades and those for the 1970-71 academic year would be relatively minimal. Table 17 presents data obtained from Grade Summary Report GR1*21 for Spring and Summer 1971. The difference between the means for Spring and Summer is significant at less than .001. Both Tables 16 and 17 thus support our hypothesis that summer grades were higher than those for a regular academic term.

TABLE 17

Course Grades for Four Terms

	Fall 1970	Winter 1971	Spring 1971	Summer 1971
Number of Course Grades	33,828	33,196	30,574	6,636
Mean	2.54	2.57	2.63	2.68
Standard Deviation	1.041	1.049	1.048	1.092

TABLE 18

Comparison of Summer and Spring
Grade Averages by Campus

	Summer			Spring	
	Western (5-week)	Western (8-week)	Metro (8-week)	Western (11-week)	Metro (11-week)
Number of Course Grades	903	989	4,744	11,099	19,475
Mean	2.64	2.75	2.67	2.60	2.65
Standard Deviation	.957	.989	1.07	1.062	1.039

The hypothesis that eight-week and five-week summer term grades did not differ must be rejected according to the data on Tables 18 and 19. A comparison of all grades for the eight- and five-week summer modules on the Western Campus indicated that the eight-week grades were significantly higher. The main component of the higher summer G.P.A. was the eight-week module grades as the data in Table 4 indicate. Comparisons where eight-week grades were not included as a factor were not significant.

Table 19 shows the t values for comparison of grades for groupings by campus and term length. The t values indicate the level of significance for the differences resulting from subtracting the column mean from the row mean; the mean for each campus and term length unit can be found on Table 18. The mean grade for courses taken during the eight-week summer session at Western was higher compared to any other group of grades.

The higher eight-week course grades may be attributable to differences in the types of courses scheduled for the eight-week module or in the kinds of students attracted to the eight-week session. There is also the possibility that the grades awarded in the summer courses were related to the number of hours carried by the students earning the grades. The idea is that the students who took fewer hours may have earned higher grades. The relationship was examined first by comparing the mean G.P.A. of 35 students who took more than ten hours (2.87) to the mean G.P.A. of 124 students who took fewer than eleven hours (2.95). The difference was not significant. The relationship was also examined by correlating the number of hours a student took with his grade point average for those hours. The results in Table 20 indicate no relationship.

While significantly higher, the differences between the eight week and other means were actually quite small, the largest difference amounting to only .15.

TABLE 19

t Values for Mean Course Grades by
Campus and Term Length

Means@ by Campus and Term Length	Means by Campus and Term Length				
	Western (5-weeks)	Western (8-weeks)	Western (11-weeks)	Metro (8-weeks)	Metro (11-weeks)
Western (Summer - 5 weeks)	0.00	-2.54*	1.09	- .89	- .40
Western (Summer - 8 weeks)	2.54*	0.00	4.39*	2.16*	2.96*
Western (Spring - 11 weeks)	1.09	-4.39*	0.00	-4.01*	-4.33*
Metro (Summer - 8 weeks)	.89	-2.16*	4.01*	0.00	1.18
Metro (Spring - 11 weeks)	.40	-2.96*	4.33*	-1.18	0.00

@See Table 18 for the mean G.P.A.'s corresponding to the campus and term length units presented here.
*Significant at less than .02.

TABLE 20

Correlation Between Number of Summer Credit Hours Registered
and Grade Point Average for Those Hours

	Campus			
	Metropolitan		Western	
	Hours	G.P.A.	Hours	G.P.A.
(Number of Students)	(87)	(87)	(72)	(72)
Mean	8.0	2.86	5.4	3.02
Standard Deviation	4.3	.81	2.8	.83
Correlation	- .03		.02	

Additional Student Opinions About the 1971 Summer Session

Student opinions about the quality of instruction, the convenience of the time of day classes were scheduled, and grading compared to the regular year for reported courses are presented on Table 21. The distribution of responses indicate that for courses rated by the students the quality of instruction was considered to be at least as good as the regular year; grading was judged to be about the same. Responses to "time of day class met" were not scaled and could not be analyzed for significance.

TABLE 21

Opinions About Quality of Instruction, Time of Day Class Met and Grading for Courses Reported by Student Respondents

Item	Percent of Responses		
	Metropolitan Campus	Western Campus	Total
Quality of Instruction Compared to Regular Year			
Same	45	62	53
Better	39	27	33
Not as Good	16	12	14
Departure from "Same"	p<.001	p<.005	
Time of Day Class Met			
Convenient	79	83	81
Inconvenient	20	15	18
A Problem	1	2	1
Grading Compared to Regular Year			
Same	64	71	67
More Difficult	17	4	16
Not as Difficult	19	15	17
Departure from "Same"	p<.20	p<.20	

Summary of Factors Related to Summer Term Length

Objective data indicated that number of FTE students in attendance during the summer is directly related to summer term length. By comparing the campuses, we discovered that Western respondents carried fewer credit hours than Metropolitan Campus respondents and surmised that Western's short term with a longer session operating primarily in the evening resulted in fewer FTE students. An examination of summer enrollment data showed significant differences in which Western had a smaller proportion of FTE student enrollment.

Student opinions about the appropriateness of the term length experienced for reported courses reulted in a significant proportion of "too few" weeks for courses taken on a five-week basis. Significant proportions of responses on both campuses corresponded to "too long" for length of class period per day.

Preferences as reported by faculty for five, six, or eight-week terms indicated significance in two subject areas: English and Speech respondents favored a shorter term (five or six-weeks) and Technical-Occupational respondents preferred a longer term (eight-weeks). There was no relationship between the term length(s) taught by faculty respondents during the summer and their reported preference for a particular term length.

Summer grades were significantly higher than regular term grades. Eight-week grades at the Western Campus were higher than five-week grades at Western and eight-week grades at the Metropolitan Campus. While significantly higher, the differences between the eight-week grade mean and other means were actually quite small, the largest difference being .15. No relationship existed between the number of hours summer students carried and the grades they received.

Additional comments by faculty on summer term length generally reinforced their reported preference or cited suggestions for the length of future summer sessions. Some remarks were unrelated to the matter of term length and many respondents offered no additional comments.

SUMMARY

More students enrolled in the Summer Session at Cuyahoga Community College in 1971 than in 1967. However, summer enrollments at Cuyahoga Community College have grown at a rate slower than the growth rates for four other institutions.

An examination of factors related to summer student enrollment was approached mainly through two sources: faculty opinions about influences on summer enrollment and students' reported reasons for attending the 1971 summer session at Cuyahoga Community College.

An examination of reported faculty opinions showed little unanimity about the relative importance of three influences on enrollment: the availability of summer employment to students, the variety of courses offered by Cuyahoga Community College, and the length of the summer session. However, faculty respondents generally agreed that advertising of the summer session was a relatively unimportant influence on enrollment. Additional influences on student enrollment cited by faculty respondents were: the scheduling of the Cuyahoga Community College summer session in relation to the scheduling of summer terms at other schools, the appeal of individual faculty members, student finances and the low cost of Cuyahoga Community College, small class size in summer, and transferability of summer credits to other institutions.

Student respondents cited their reason(s) for enrolling in the summer session. Reasons most frequently reported related to enabling the student to complete his schooling, i.e. "to get his degree or finish his program sooner." Students also reported that they had wished to make up credits or enrolled simply because courses appealed to them. Additional reasons reported by students included: lessening the number of courses needed during the regular year, earning of credit hours for transfer, and the unavailability of summer employment.

We discovered that the reported reasons for summer enrollment were not related to the respondents' summer employment status nor to whether the respondents had previously attended a summer session.

The experience of respondents with class scheduling and transportation to the campus during the 1971 summer session suggested that these two variables were relatively unimportant problems for those enrolled. The large majority of respondents reported that scheduling of classes around their job hours had presented no problem. Most respondents found transportation to the campus to be convenient.

Summer term length, of course, is the influence on student enrollment which we can most easily manipulate and which was the subject of our immediate concern. An examination of factors related to summer term length was approached in three ways: the consequences of a "shorter" versus a "longer" summer session, student respondents' satisfaction with the length of term(s) experienced, and faculty opinions about the length(s) of the 1971 summer session.

A comparison of the cancellation rates for five- and eight-week courses indicated that a slightly smaller proportion of five-week courses were cancelled. However, most day offerings were five-week and all evening courses were eight-week; thus in order to say that the five-week module was more popular with students we would have to count the day/evening variable as having no influence upon student choice.

The shorter term resulted in fewer FTE students according to summer enrollment statistics. A striking campus difference in the average number of hours carried by summer students underscored the logical consequence of applying a standard amount of class time to a college credit hour, i.e. the shorter the term length, the fewer the credit hours a student can take.

Summer grades were significantly higher than those for a regular academic term. Eight-week course grades at Western were significantly higher than grades for the eight-week term at the Metropolitan Campus and those for the five-week term at Western. The number of hours carried by summer students and summer grades were not related.

Student respondents were asked to indicate satisfaction or dissatisfaction with the length(s) of term for courses they took. A significant proportion of five-week courses were judged to have had too few weeks in the session. A significant proportion of all reported courses (both eight- and five-week) were rated as "too long" in terms of length of time spent in class. The quality of summer instruction was judged to be at least as good as the regular year, while grading was reported to be about the same.

Faculty opinions about term length revealed significance in two subject areas: English and Speech faculty respondents favored a shorter summer term (five- or six-weeks) while Technical-Occupational faculty respondents preferred a longer term. There was no relationship between preference for length of term reported by faculty and the length(s) of term they actually taught during the 1971 summer session.

Additional faculty comments on term length generally reinforced their already stated preference, usually with no explanation of why a particular term length might be more appropriate. Various combinations of summer modules were offered including a few suggestions that the summer session be extended to a full, twelve-week term.

CONCLUSION

We have viewed student enrollment as one barometer of the extent to which the Cuyahoga Community College summer session accommodates summer students. We have identified and attempted to examine a variety of influences on enrollment. The most powerful influence seems to be the logical relationship between the length of the term and the number of credit hours a student may take.

The study has served to support many ideas about the matrix of influences and alternatives to be analyzed in relation to the task of setting the calendar for a summer session. The matrix which we have derived from our study includes the dimensions of (1) alternative lengths of term(s), (2) student concerns in deciding to attend or not to attend a summer session, (3) faculty concerns in deciding to teach or not to teach a summer session, and (4) institutional concerns in offering a summer session.

Student concerns consist of reasons for or against attending, circumstances which facilitate or hinder attendance, and attitudes which dispose a student to or not to attend. We have reported the most frequently cited reason for attending as concerned with finishing the program or degree sooner. We have commented that the goal of education to increase knowledge, skill, and understanding may be related to accelerating or prolonging a program of study. We haven't been able to demonstrate the consequences of these and other related statements. In other words, we have moved only a little towards clarifying the ways in which the length of a summer session affects the ways in which the students are served. However, it still seems of great importance to consider the full list of factors related to the students' decision that determine whether they should or should not attend a summer session.

Faculty concerns haven't been directly included in the study except that we have found some indication that the desire to help the student reach course objectives is at least as important as a desire to earn a given amount of money in as short a time as possible. Additional concerns of faculty, such as vacation time, time to further their own education, and a tendency to compare working conditions, should probably be included in the matrix of influences.

Our study has not included any consideration of institutional concerns such as efficient utilization of its physical facility and community use of the facility for non-credit activities, and the basic matters of obtaining adequate staff for the operation of a summer session and of paying the bills for the entire operation.

The total picture seems to indicate that a combination of long and short terms would be the most accomodating arrangement of summer term lengths although it would probably not be the most trouble-free arrangement.

APPENDIXES

Appendix		Page
1	Summer Ss Compared to Regular Year, Fall, Winter, Spring 1970-71	31
2	Comparison of Summer Students to Fall, Winter, Spring Students 1970-71	33
3	A Three-Year Comparison of Percentage of Males and Females for Three Quarters	34
4	A Three-Year Comparison of Enrollments by Term and New/Continuing/Returning Status	35
5	Comparison by Term of the Percentages of Students Classified by Sex and Program	36
6	Comparison by Term of the Percentages of New and Former Students Classified by Transfer Status	37
7	Comparison by Term of the Percentages of Students Classified by Age Groups	38
8	Summer Students Classified by Full or Part-Time Status, Respondent Status, Transfer Status, and New/Continuing/Returning Status	39
9	Comparison of Summer Faculty Contacted to Faculty Respondents in Terms of Sex and Campus	40
10	Average Rank of Influences Affecting Summer Student Enrollment by Faculty's Reported Preference for Length of Summer Session	41
11	Unemployment Data 1967-1971	42
12	Distribution of Subject Areas for Courses Reported by Student Respondents	43
13	What A Ten-Credit Hour Summer Load Entails in Class Time and Theoretical Study Time	44

APPENDIX 1

SUMMER Ss COMPARED TO REGULAR YEAR FALL, WINTER, SPRING 1970-71

Who are the students who attend summer school? Are they, for example, generally older or younger than students who attend Cuyahoga Community College during the regular academic year? Is the student body in the summer comprised of different proportions of males and females, or of new, continuing and returning students than the student body in the regular academic year?

In attempting to answer such questions a problem arose in selecting the term of the regular academic year to use as a basis for comparison to summer students. Specifically, we wanted to define "regular" term students. Might one quarter be considered typical with respect to the sex and age distribution of the student body, the percentage of transfers, and the percentages of new, continuing and returning students, or would an average of Fall, Winter and Spring be appropriate? An analysis of enrollment data for nine academic quarters, 1968-69, 1969-70 and 1970-71 indicated such variability in the characteristics of the student body that we felt that neither an average of three quarters nor the selection of any one term provided a good basis for comparison to summer students. Thus, in Appendix 2, the 1971 summer students are compared to the individual Fall, Winter and Spring 1970-71 groups of students.

In terms of new student status, the largest percentages of new students attended in the Fall term (37 percent), the next largest percentage attended in Summer (24 percent); Winter had 18 percent and Spring had 15 percent.

Considering the classification of new students by sex, a larger percentage of the new summer students were female (55 percent) compared to the other terms (47 percent, 41 percent, and 47 percent, respectively). Interestingly enough, a larger percentage of all summer students were females (51 percent) compared to the other terms (43 percent, 41 percent, and 43 percent, respectively).

The percentage of the total student enrollment which is female increased for three years, from 38 percent in Fall 1968 to 39 percent Fall 1969, to 43 percent Fall 1970, to 43 percent Fall 1971. (See Appendix 3.)

Getting back to the new student classification, a larger percentage of summer students were transfer students (38 percent) compared to the other terms (22 percent, 28 percent, and 34 percent, respectively). (See Appendix 6.)

How many of the new and returning students for Summer were transients, or students enrolled in other institutions for the regular year, cannot be ascertained. But the inferred presence of such students suggests that the Cuyahoga Community College Summer Session serves not only Cuyahoga Community College students but also other college students interested in earning and

transferring summer credits. The implication is, of course, that we should find out what proportion of students are served in this way and subsequently maintain a summer schedule of course offerings which allows for transferability of credits.

The implication of the relatively large percentage of new students in summer school is affected by the proportion of these students who have transferred into Cuyahoga Community College from another college and by the striking difference in frequencies from term to term. It is clear that about two-thirds to three-fourths of the new students at Cuyahoga Community College do not transfer from another college and that the largest influx of new students conforms to the conventional pattern occurring in the fall term. Beyond that, the proportion of new students who are transfer-ins increases cyclically through the year.

Looking again at the variable of sex, the distribution of the sexes in the University Parallel or Career Programs remains reasonably steady through the four terms, considering that the percentage of females among the students increases for the summer term. The distribution appears to fluctuate quite widely, perhaps reflecting an instability of student choice, or of student enrollment, or of both these two and other factors. (See Appendix 5.)

The distribution of students by age generally indicates, as one would expect, that the student body grows older through the year, except for summer, when the composition of the student body changes. Of course we would also expect that some of the new students in the summer will be new high school graduates, and the distribution suggests this might be true, with seven percent reported as 18 or younger in the spring term compared to ten percent in the summer. (See Appendix 7.)

APPENDIX 2

COMPARISON OF SUMMER STUDENTS TO
FALL, WINTER, SPRING STUDENTS 1970-71

Comparison of Student Status by Academic Term								
Student Status	Term							
	Fall 1970		Winter 1971		Spring 1971		Summer 1971	
New	6,136	37%	2,876	18%	2,161	15%		24%
Continuing	8,095	49%	11,164	71%	11,089	74%		62%
Returning	2,401	14%	1,806	11%	1,678	11%		14%
TOTAL	16,621		15,846		14,928			

Classification of New Students by Sex				
New Students	Term			
	Fall 1970	Winter 1971	Spring 1971	Summer 1971
Male	53%	59%	53%	43%
Female	47%	41%	47%	55%

Percentage of Males and Females by Term					
Sex	Term				
	Fall 1970	Winter 1971	Spring 1971	Summer 1971	
				All Ss	Respondents
Male	9,524 57%	9,427 59%	8,576 57%	2,708 49%	100 49%
Female	7,108 43%	6,419 41%	6,352 43%	2,823 51%	106 51%
TOTAL	16,632	15,846	14,928	5,531	206

APPENDIX 3

A THREE-YEAR COMPARISON OF PERCENTAGE OF MALES AND FEMALES FOR THREE QUARTERS

	Fall		Winter		Spring	
1968						
Males	9,100	62%	8,131	64%	7,854	63%
Females	5,644	38%	4,616	36%	4,618	37%
TOTAL	14,744		12,747		12,472	
1969						
Males	9,317	61%	8,387	61%	7,732	59%
Females	6,044	39%	5,315	39%	5,298	41%
TOTAL	15,361		13,702		13,030	
1970						
Males	9,524	57%	9,427	59%	8,576	57%
Females	7,108	43%	6,419	41%	6,352	43%
TOTAL	16,632		15,846		14,928	

APPENDIX 4

A THREE-YEAR COMPARISON OF ENROLLMENTS BY TERM
AND NEW/CONTINUING/RETURNING STATUS

	Fall		Winter		Spring	
	N	Percent	N	Percent	N	Percent
1968						
New	6,299	43	2,181	17	2,037	16
Continuing	7,143	49	9,571	75	9,194	74
Returning	1,255	8	995	8	1,239	10
TOTAL	14,697		12,747		12,470	
1969						
New	6,053	40	2,056	15	1,760	14
Continuing	7,669	50	10,269	75	9,804	75
Returning	1,557	10	1,366	10	1,466	11
TOTAL	15,279		13,691		13,030	
1970						
New	6,136	37	2,876	18	2,161	15
Continuing	8,095	49	11,164	71	11,089	74
Returning	2,401	14	1,806	11	1,678	11
TOTAL	16,632		15,846		14,928	

APPENDIX 5

COMPARISON BY TERM OF THE PERCENTAGES OF STUDENTS CLASSIFIED BY SEX AND PROGRAM

Sex by Program	Term			
	Fall 1970	Winter 1971	Spring 1971	Summer 1971
	Percent	Percent	Percent	Percent
University-Parallel				
Male	38	38	34	33
Female	23	20	16	25
Technical-Occupational				
Male	19	21	23	16
Female	20	21	27	26

APPENDIX 6

COMPARISON BY TERM OF THE PERCENTAGES OF
NEW AND FORMER STUDENTS CLASSIFIED BY TRANSFER STATUS

New and Former Students by Transfer Status	Term							
	Fall 1970		Winter 1971		Spring 1971		Summer 1971	
	N	%	N	%	N	%	N	%
New Students	6,136	37	2,876	18	2,161	15	1,325	24
Transfer	(1,330)	(22)	(798)	(28)	(740)	(34)	(505)	(38)
Non-Transfer	(4,806)	(78)	(2,078)	(72)	(1,421)	(66)	(820)	(62)
Continuing and Returning Ss	10,496	63	12,970	82	12,767	85	4,206	76
Transfer	(2,665)	(25)	(3,161)	(24)	(3,145)	(25)	(1,099)	(26)
Non-Transfer	(7,831)	(75)	(9,809)	(76)	(9,622)	(75)	(3,107)	(74)
TOTAL	16,632		15,846		14,928		5,531	

APPENDIX 7

COMPARISON BY TERM OF THE PERCENTAGES OF STUDENTS
CLASSIFIED BY AGE GROUPS

Age	Term									
	Fall 1970		Winter 1971		Spring 1971		Summer 1971			
	N	%	N	%	N	%	All Ss N	All Ss %	Respondents N	Respondents %
18 or less	1,996	12	1,426	9	1,034	7	559	10	6	3
19-20	4,324	26	4,120	26	3,991	27	1,363	25	63	30
21-22	2,328	14	2,218	14	2,220	15	829	15	28	14
23-25	1,996	12	2,218	14	2,220	15	894	16	34	16
26-30	1,996	12	1,902	12	1,773	12	661	12	24	12
31-40	1,663	10	1,743	11	1,624	11	549	10	26	13
Over 40	1,331	8	1,268	8	1,181	8	380	7	20	10
No data	998	6	951	6	885	6	296	5	5	2
TOTAL	16,632		15,846		14,928		5,531		206	
No.	15,634		14,895		14,043		5,235		201	
Mean	25.09		25.39		25.43		24.97		26.05	
Standard Deviation	7.90		7.86		7.78		7.47		8.11	

APPENDIX 8

SUMMER STUDENTS CLASSIFIED BY FULL OR PART-TIME STATUS,
RESPONDENT STATUS, TRANSFER STATUS,
AND NEW/CONTINUING/RETURNING STATUS

Distribution of Full and Part-Time Summer Students
by Respondent Status and Transfer Status

Full-Time Summer Students

	Respondents	Non-Respondents	All Ss
Transfer	12	48	60
Non-Transfer	25	87	112
TOTAL	37	135	172

Chi Square is .125, not significant

Part-Time Summer Students

	Respondents	Non-Respondents	All Ss
Transfer	33	1511	1544
Non-Transfer	136	3679	3815
TOTAL	169	5190	5359

Chi Square is 7.33, significant at .01

Distribution of Full- and Part-Time Summer Students
by Respondent Status and New/Continuing/Returning Status

Full-Time Summer Students

	Respondents	Non-Respondents	All Ss
New	3	20	23
Continuing	33	98	131
Returning	1	17	18
TOTAL	37	135	172

Chi Square is 4.741, not significant

Part-Time Summer Students

	Respondents	Non-Respondents	All Ss
New	34	1268	1302
Continuing	113	3185	3298
Returning	22	737	759
TOTAL	169	5190	5359

Chi Square is 2.218, not significant

APPENDIX 9

COMPARISON OF SUMMER FACULTY CONTACTED TO FACULTY RESPONDENTS IN TERMS OF SEX AND CAMPUS

Sex Distribution of Faculty Contacted and Respondents

Sex	Faculty Contacted		Faculty Respondents	
	No.	%	No.	%
Male	94	79	53	79
Female	25	21	14	21
Total	119		67	

Campus Breakdown of Faculty Contacted and Respondents

Campus	Faculty Contacted		Faculty Respondents	
	No.	%	No.	%
Metropolitan	85	71	47	70
Western	34	29	20	30
Total	119		67	

APPENDIX 10

AVERAGE RANK OF INFLUENCES AFFECTING
SUMMER STUDENT ENROLLMENT BY FACULTY'S REPORTED PREFERENCE
FOR LENGTH OF SUMMER SESSION

Preferred Length of Summer Term (by Campus)	Influences on Summer Student Enrollment				N
	Availability of Employment	Advertising of Summer School	Variety of Courses Offered	Length of Summer Session	
Five-Week Term Preferred					
Western Faculty	2.40	3.60	1.80	2.20	5
Metropolitan Faculty	2.67	3.33	2.71	1.29	12
Six-Week Term Preferred					
Western Faculty	2.00	3.67	2.00	2.33	3
Metropolitan Faculty	2.33	3.25	2.67	1.75	12
Eight-Week Term Preferred					
Western Faculty	1.67	2.33	2.67	3.33	7
Metropolitan Faculty	2.50	2.91	1.82	2.76	22

APPENDIX 11

UNEMPLOYMENT DATA 1967-1971
DATA SOURCE: LABOR MARKET ANALYST,
OHIO STATE EMPLOYMENT SERVICES (11/19/71)

Year	Cleveland Metropolitan Area*			State of Ohio			
	May	June	July	May	June	July	Annual
1967	2.5%	2.9%	3.2%	--	--	--	3.2%
1968	1.7%	2.3%	2.9%	--	--	--	2.9%
1969	1.7%	2.6%	2.5%	--	--	--	2.8%
1970	4.0%	4.8%	4.5%	--	--	--	4.2%
1971	4.5%	5.4%	5.3%	4.7%	5.9%	5.7%	--

*Includes Cuyahoga, Geauga, Lake, and Medina counties.

APPENDIX 12

DISTRIBUTION OF SUBJECT AREAS FOR COURSES
REPORTED BY STUDENT RESPONDENTS

Subject Area	Metropolitan Campus		Western Campus		Total	
	No.	%	No.	%	No.	%
Social Studies: including psychology, sociology, social science, anthropology, history, political science, geography and philosophy	48	29	52	38	100	33
Mathematics	12	7	6	4	18	6
English and Speech	23	14	27	20	50	17
Sciences: including biology, microbiology, chemistry, geology, anatomy and physiology	14	9	9	7	23	8
Business: including secretarial science, law, accounting, data processing and economics	40	24	12	9	52	17
Technologies: including machine tools, mental health, industrial supervision and aviation	22	13	22	16	44	15
Miscellaneous: including physical education, art, music	5	3	8	6	13	4
Total	164	99%	136	100%	300	100%

APPENDIX 13

WHAT A TEN-CREDIT HOUR SUMMER LOAD ENTAILS IN CLASS TIME AND THEORETICAL STUDY TIME

During the 1971 Summer Session, a full-time student was defined as one carrying nine credit hours on the Metropolitan Campus or six credit hours on the Western Campus. Metropolitan Campus students who attempted to register for twelve or more credit hours were generally required to obtain the signature of a counselor or faculty advisor. Students at Western registering for approximately eleven credit hours or more were advised to see a counselor but were not required to obtain a signature.

The number of credit hours carried by summer students ranged from two to 21. The following table demonstrates what ten credit hours entails in class time and theoretical study time for the student taking it on a five, eight or eleven-week basis. A ten-hour load has been selected for examination since students on both campuses could take that many hours without being encouraged to seek the advice of a counselor.

TABLE A

CLASS AND STUDY TIME PER WEEK AND DAY FOR TEN QUARTER HOURS OF CREDIT TAKEN ON A FIVE, EIGHT OR ELEVEN WEEK BASIS

Length of Term	No. of Class Hrs.		No. of Study Hrs.		Total Hrs. per week	Class + Study per day
	per week	per day	per week	per day		
Five-week	22.00	4.40	44.00	8.80	66.00	13.20
Eight-week	13.75	2.75	27.50	5.50	41.25	8.25
Eleven-week	10.00	2.00	20.00	4.00	30.00	6.00

*Two hours per class hour were used to calculate theoretical study time.

The computations for the ten credit hours assume straight lecture; courses requiring laboratory time would involve more class hours but probably little if any additional study time. These calculations do not include, of course, time for transportation, meals, leisure and sleep.

The individuals who signed up for 19 credit hours in eight weeks theoretically committed 78.3 hours per week to school activities alone.

Table B shows the distribution of summer students by number of hours carried. Over 300 summer students carried eleven or more hours.

TABLE B

SUMMER STUDENT ENROLLMENT BY NUMBER OF HOURS CARRIED

No. of Credit Hours	Metropolitan Campus	Western Campus	Total
9 or less	3,387	1,594	4,981
10	182	36	218
11	137	23	160
12	59	13	72
13	24	4	28
14	18	1	19
15	17	1	18
16	10		10
17	6		6
18	2		2
19	16		16
20	--		--
21	1		1
TOTAL	3,859	1,672	5,531

Grade point averages of students who carried eleven or more hours were examined for differences between grades received for summer work and for course work completed prior to summer. Table C shows the mean difference between summer and prior G.P.A. for a group of 32 respondents who carried eleven or more hours. The difference is not significant so we can conclude that students in the sample who carried eleven or more summer hours received about the same grades they would have gotten during the regular academic term, while those who carried less than eleven hours received higher grades for their summer work.

TABLE C

MEAN DIFFERENCE BETWEEN SUMMER AND PRIOR G.P.A. FOR RESPONDENTS CARRING ELEVEN OR MORE HOURS

Number of Respondents Who Carried Eleven or More Hours	32
Mean Prior G.P.A.	3.01
Mean Summer G.P.A.	2.90
Mean Difference	- .11
Minimum Hours Carried	11
Maximum Hours Carried	16